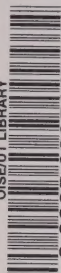


Ministry
of
Education

Hon. Bette Stephenson, M.D., Minister
Harry K. Fisher, Deputy Minister

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Ontario

Assessment

Instrument

Pool

A General Introduction


1980

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Introduction

The Ontario Assessment Instrument Pool (OAIP)¹ is a resource designed to assist those in education in fulfilling their responsibilities for evaluating student achievement and the effectiveness of programs in the schools.

OAIP will consist of several pools of assessment instruments, each pool corresponding to a Ministry of Education curriculum guideline. Pools of instruments are being developed in the following areas:

- anglais (Grades 4-10)
- chemistry/chimie (Grades 11-13)
- English (Grades 7-10)
- français (Grades 4-10)
- French as a second language (Grades 6 and 10)
- geography/géographie (Grades 7-10)
- history/histoire (Grades 7-10)
- mathematics/mathématique (Grades 4-6)
- mathematics/mathématique (Grades 7-10)
- physics/physique (Grades 11-13)

Beginning in the fall of 1980, the pools of instruments in OAIP will be made available to schools as they become ready for use. To help those in education become familiar with OAIP, the Ministry of Education, in co-operation with teachers' and supervisory officers' organizations, is planning a province-wide information program.

The instruments that arrive in the schools in 1980-81 will have been approved by the Subject Advisory Groups² as reflecting the spirit of the curriculum guidelines, and will have been pilot-tested in some classrooms as part of the development process. Although the instruments in some pools will have an estimated level of difficulty based on this pilot-testing, statistically valid difficulty levels will not be available until large-scale field trials have been held.

The Ministry of Education plans to conduct such large-scale provincial field trials for all pools, so that eventually descriptive information related to the performance of students in the province will be provided for all of the instruments in the pools. For example, the information may take the form of a "p value", indicating the proportion of students in the provincial sample achieving success on a particular instrument. In May 1981, provincial field trials are scheduled for the assessment instruments developed to assess reading and writing, and mathematics skills of English-speaking students in Grades 7 to 10.

The instruments will be printed on standard-sized paper and packaged in folders by subject area. The pages will be punched to facilitate storage in loose-leaf binders if desired. The nature of the material permitting, certain pools will be made available in computer readable formats.

One way to prepare the instruments for use in the classroom is to photocopy them and then cut and paste them together. Starting with a good quality photocopy of each instrument to be used, teachers may cut away the information not intended for students, arrange the instruments on a blank sheet of paper, number them, and make the quantity of photocopies required. Alternatively, the instruments may be retyped or written by hand on a ditto or on the blackboard.

1. For further information on the Ontario Assessment Instrument Pool and related research projects see: "The Ontario Assessment Instrument Pool: A Curriculum-Based Aid to Evaluation", *Research and Evaluation Bulletin* 1, 1979. Copies may be obtained at \$1.50 from:

The Ontario Government Bookstore
880 Bay Street
Toronto, Ontario
M7A 1L2

or from:

The Ontario Institute for Studies in Education
Publications Sales
252 Bloor Street West
Toronto, Ontario
M5S 1V6

2. For each OAIP contract, there is a Subject Advisory Group whose responsibility is to ensure the relevance of the assessment instruments to the curriculum guidelines. Each group is chaired by a curriculum specialist from the Ministry of Education and is made up of the principal investigator, representatives from the Ontario Teachers' Federation, and other subject experts from across the province.

All of the instruments in OAIP should be available to anyone in education who wishes to use them. For this reason, it is important that the principal and staff of a school decide on a method of storage that allows ready access and at the same time maintains the contents of the pools intact. One method of storage would be to keep a master copy of each pool in the teachers' reference section of the resource centre so that, from time to time, the circulating copies of the pools could be checked against the master copies for completeness. As additional materials become available, instructions will be provided for updating the pools.

The purposes of this booklet are to provide general information about all the pools in OAIP and to indicate ways in which OAIP may be used to assist in the evaluation of student achievement and program.

Rationale

Everyone in education is responsible for evaluating some part of the educational system: teachers for evaluating student achievement and programs in their classrooms, principals for monitoring student achievement and programs in their schools, and board and Ministry personnel for monitoring policies and programs within their jurisdictions. OAIP has been developed to assist educators in fulfilling their responsibilities for evaluation.

OAIP had its beginning in the review of evaluation and reporting procedures announced by the Minister of Education in 1976. The review was prompted chiefly by a growing uncertainty about the quality of student achievement, and by increasing public pressure for better and more reliable information.

The need for improved procedures for evaluation and reporting was further indicated by the results of the *Secondary/Post-Secondary Interface Study*³ released in 1977. The study found that, although the general perception was that the quality of education had deteriorated, the level of student performance compared favourably with that of students a decade earlier. In revealing the discrepancy between perceived and actual performance, the study showed the need for the collection, on a regular basis, of the kinds of information that would allow educators to report clearly and confidently on the performance of the educational system. As well, it found that even the best tests available were inadequate to the task of measuring student performance on all parts of the program content.

In conducting the review of evaluation and reporting procedures, the Ministry of Education funded a number of research studies that examined the methods of assessment and evaluation currently in use. At the same time, Ministry officials investigated the methods in use in other jurisdictions and consulted widely with experts in measurement and evaluation. As well, a Minister's Work Group on Evaluation and Reporting, chaired by Mrs. Claudette Foisy-Moon of the secretariat of the Ontario Teachers' Federation, was formed for the purpose of recommending evaluation procedures appropriate to education in Ontario. From these various studies and reviews, the concept of the Ontario Assessment Instrument Pool emerged.

3. *Secondary/Post-Secondary Interface Study: Summary Report* (Toronto: Ministry of Education and Ministry of Colleges and Universities, Ontario, 1977).

OAIP provides uniform assessment materials for use throughout the province. The materials correspond to the objectives in the Ministry of Education curriculum guidelines. OAIP is made up of “instruments”, a term used to signify a range of assessment tools much wider than is generally found in standardized tests of achievement. The instruments have been developed jointly by classroom teachers, curriculum specialists, and experts in testing to ensure their practicality in the classroom as well as their quality as assessment tools. The instrument pools permit flexible application, allowing users to select instruments to suit a variety of assessment purposes in relation to the particular content of instruction.

The intent of OAIP is to provide teachers and other educators with additional assessment resources to assist in the evaluation of student achievement and program. OAIP is not designed, nor should it be used, for the purposes of teacher evaluation or for the comparison of individual schools or school boards. It is important, therefore, that OAIP be used sensitively and with awareness that the harmful effects of an assessment technique improperly used may outweigh its benefits.

Contents

When the research contracts now in progress have been completed, OAIP will consist of sixteen pools of instruments – one for each of the subjects/divisions listed on page 4. Because each pool has been designed to complement a specific curriculum guideline, the pools in their content and format will reflect the diversity that exists among the various guidelines. At the same time, the pools will have similarities.

Each pool will have an introduction that explains the features unique to it. The introduction will show how the pool is organized, and how the instruments and the information accompanying them can be used.

Most pools will have a table at the beginning that relates the instruments in the pool to the objectives in the guideline. This table will provide teachers with an overview of the contents of the pool, and will assist them in selecting and locating instruments. Figure 1 shows a section of the table from the pool in Intermediate Division English relating instruments to objectives in reading. In Figure 1, the instruments related to the first sub-objective (1.1) of the first objective (1.0) in the curriculum guideline are listed. Each instrument listed under this sub-objective consists of a reading passage followed by a series of multiple-choice items. In the first column of the table, the kind of reading passage, the instrument number, and the item number are identified. For example, FIC 103-2 denotes “Fiction”, instrument number 103, item number 2. In the second column, the recommended grade level is indicated. In the third column, the estimated level of difficulty for the item is provided; the scale of difficulty for the instruments in this pool ranges from 1 to 5, difficult to easy. Although most pools will have a table that provides information similar to that in Figure 1, the format of the table will vary from pool to pool.

Figure 1: A section of the introductory table relating instruments to guideline objectives in Intermediate Division English

Assessment Instruments Intermediate Division English		
1.0 Think about experiences, ideas, and feelings with increasing clarity, logic, and sensitivity;		
1.1 Develop powers of observation and recall;		
<i>Instrument and Item</i>	<i>Recommended Grade</i>	<i>Estimated Difficulty</i>
FIC 103-2	7	4
FIC 105-4	7	3
FIC 107-1	7	4
-2	7	4
-11	7	4
FIC 108-1	7	5
-2	7	5
-5	7	5
-7	7	3
SOC107-5	7	2
SCI 101-2	7	4
-5	7	3
POE101-1	7	4
-3	7	3
FIC 102-1	8	3
-2	8	4
-3	8	5
-4	8	4
-8	8	3

In addition to the table relating instruments to objectives, some pools will have a key-word index to assist users in locating the objectives. For example, if teachers of English wished to assess students' ability to make inferences, they could locate the objectives and related instruments by looking up "inference" in the key-word index.

The format of the instruments will vary from one pool to another. A sample instrument from the reading section of the pool in Intermediate Division English is presented in Figure 2 (see below and page opposite). The instrument consists of a reading passage and

six items based on it. In the column on the right (see page opposite), the objectives, answers, scoring instructions, and key words are provided. Most instruments in the pools will have at least the basic information shown in the illustration.

Figure 2: A sample instrument, Intermediate Division English
The reading passage

The Two Willies

- In those days, before anyone dreamed of dressing children to look like grown-ups; when "tussore" silk frocks were embroidered with cross-stitch and when black cotton stockings, ribbed, and high button boots, corkscrew curls and butterfly hair ribbons were regulation apparel for the small girl – in those days Elizabeth had no second-hand knowledge of the feeling of love. The strange sensation that choked her heart was closer to pain than joy. The more she hugged it into herself the more did she want to burst into a hundred pieces. Yet she knew it had to be secret, shared with no one. A mingling of sweetness and longing; and a name, humming through her head. The name, Willie.
- 5
- 10 Actually there were two Willies, living on the same block in West Winnipeg; and each one had a part in awaking her feelings. Across the street from her house was Wee Willie, the little two-year-old she looked after on those long afternoons when "the doctor said" she could not join the other children at school. And then, right next door to her, was Big Willie – Willie Hall, the high school boy. He it was who in summer-time took her for rides on his handle bars and in winter let her come and help him shovel snow off the sidewalk; her tiny shovel rasping against the ice, her small voice plying him with questions. He always listened seriously, and answered seriously . . . not like so many grown-ups. Perhaps he was lonely too, living with that very cross church-going mother. Anyway, it seemed to happen every spring, when she heard the rushing sound of snow melting, of water gurgling and singing underneath the icy crust; when the first crows whooped and swooped in a black stagger against the dazzling blue; she would feel this strange excitement running up and down her left side; she would sit and wait for the moment when Willie came riding home from school with his "Hello, Elizabeth!" He always gave her a special, lighted up smile; his short blond hair was bushy like a wheatfield.
- 15
- 20

Dorothy Livesay, *A Winnipeg Childhood* (Winnipeg: Peguis Publishing Ltd., 1973).
Reprinted with the permission of the publisher.

Figure 2: A sample instrument, Intermediate Division English (*cont'd*)

The Two Willies	
<p>Four answers are given for each question. Choose the correct answer. If you are not sure of the correct answer, choose the one you think is most likely to be correct. Record your answer by circling the letter beside the answer you have chosen.</p> <ol style="list-style-type: none"> It may be assumed from reading the selection that Elizabeth <ol style="list-style-type: none"> was a foolishly sentimental girl. was often ill and therefore did not attend school. was infatuated with Wee Willie. enjoyed sharing her feelings with others. The simile "like a wheatfield" (line 24) implies that <ol style="list-style-type: none"> Willie's smile was broad and sunny. Willie lived on the prairies. Willie's hair was fair and thick. Willie's hair was untidy and poorly cut. Which of the following quotations does <i>not</i> refer to Willie Hall? <ol style="list-style-type: none"> "sweetness and longing" (line 7) "lonely" (line 17) "always listened seriously" (lines 16 and 17) "lighted up smile" (line 23) The mood of this selection is <ol style="list-style-type: none"> humorous. reflective. ironic. joyful. This selection is mainly about <ol style="list-style-type: none"> little girls of long ago. babysitting a two-year-old. a young girl's secret. the feeling of love that develops in spring. The writer symbolically associates Elizabeth's feelings with <ol style="list-style-type: none"> a ride on a bicycle. long afternoons away from school. excitement running over her body. the awakening of spring. 	<p>English Reading No. 103</p> <p>Objectives 1 - 1.5 2 - 4.2.2 3 - 4.2.2 4 - 6.2 5 - 1.2 6 - 6.2</p> <p>Answers 1 - b 2 - c 3 - a 4 - b 5 - c 6 - d</p> <p>Scoring See Introduction: Weighting</p> <p>Key Wording Inference Meaning Mood Imagery</p>

Special instructions for using instruments are included in the introductions to some pools.

Forms of Instruments

The design of OAIP called for the development of a variety of instruments to assist teachers in assessing student achievement and programs in relation to a wide range of objectives in the curriculum guidelines. As well as the traditional objective, short-answer, and essay forms, OAIP will contain some informal measures such as scales for measuring attitudes and values. The following examples illustrate the variety of forms of instruments provided in OAIP.

Objective forms

Objective instruments require students to *select* the correct or most appropriate response from a field of responses. The objective form is an efficient means of measuring recognition, comprehension, and application. It is also useful in assessing skills in interpreting and analysing data, and in evaluating evidence. Some of the more common objective forms are multiple-choice, matching, true/false, and classification.

Some instruments in OAIP consist of a single objective item. Example 1 is a single-item instrument from the pool in Intermediate Division geography related to the topic of the use and management of natural resources. Such an instrument could be used by itself, in combination with other OAIP instruments, or with other questions prepared by the teacher.

Example 1: Intermediate Division Geography

Which one of the following lists contains only items that are made largely from renewable resources?

- a) raisin bread, steel girder
- b) asbestos insulation, instant coffee
- c) telephone book, frozen cod
- d) plastic raincoat, soft-drink can

Often an instrument will consist of a series of objective items. Example 2, an instrument from the language-usage section of the pool in Intermediate Division English, consists of a series of forty double multiple-choice items on the topic of subject/verb agreement. This type of instrument provides teachers with a large number of items from which to choose. Some of the items might be used as a pre-test, some as classroom exercises, and some as a post-test.

Example 2: Intermediate Division English

1. The trainer and three of the players _____ hurt in the accident, but neither the quarterback nor the coach _____ even shaken up.

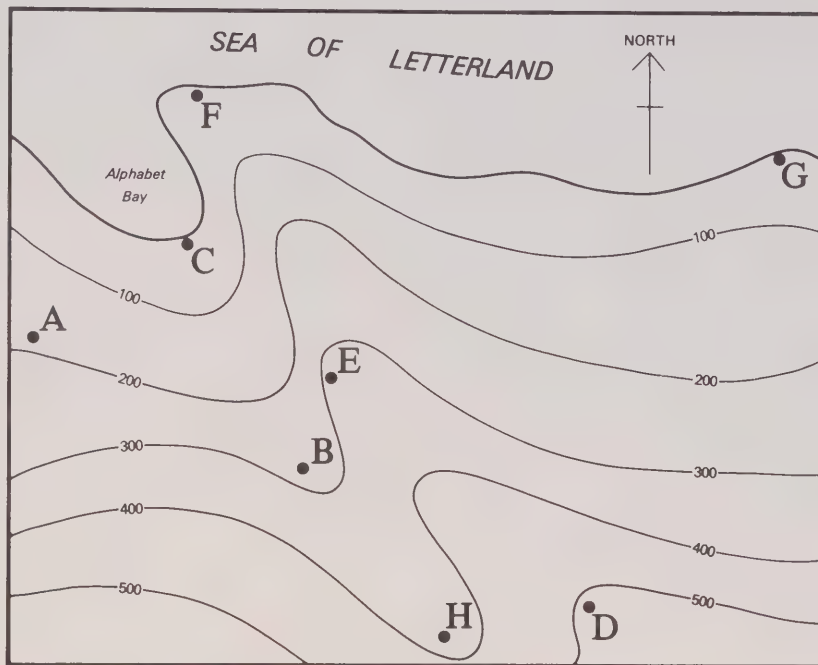
- a) were . . . were
- b) were . . . was
- c) was . . . was
- d) was . . . were

Items 2 to 40 follow the same format as item 1.

A type of instrument used frequently in OAIP consists of a stimulus (e.g., reading passage, picture, diagram, map, chart, etc.) followed by a series of objective questions. The use of stimulus material as the basis for questions is an efficient way of measuring those higher-level knowledge processes and enquiry skills which are not dependent on recall. It also reduces

ambiguity in that both question and answer are tied to a particular reference. Example 3, an instrument from the pool in Intermediate Division geography, consists of a map followed by four multiple-choice items. The instrument is designed to assess students' skills in interpreting a simple topographic map.

Example 3: Intermediate Division Geography



LETTERLAND

SCALE 1:100 000

Contour Interval 100 m



- The distance from E to G is approximately
 - 5 kilometres
 - 7 kilometres
 - 9 kilometres
 - 11 kilometres
- In which direction would a person be going when travelling from G to B?
 - northwest
 - southwest
 - northeast
 - southeast
- The course that a river would most likely follow from the highlands to the coast is along a line joining
 - D, E, and F
 - A, C, and G
 - E, C, and G
 - H, B, and C
- From which of the following points would a beach house at G be visible?
 - point A
 - point B
 - point C
 - point D

Example 4, an instrument from the pool in French as a Second Language, uses classified advertisements as the basis for a series of multiple-choice questions designed to assess comprehension.

Example 4: French as a Second Language

Les petites annonces

Je cherche un prof de piano qui demeure près de chez moi ou qui pourrait venir à la maison. J'habite Hawkesbury (centre-ville). Danielle Beaulieu, 731-1431.

Je donnerais des cours de guitare ou de piano le soir. Pour plus de renseignements: Michel au 270-3187 entre 19h00 et 22h00.

Vendrais disques usagés en très bonne condition, pas cher : Harmonium. Maneige. Beau Dommage. Robert Paquette. Beaucoup d'autres. Jocelyne au 273-1415.

Cherche violon usagé (de 15 à 20 ans au moins). Serais prête à payer \$100 à \$150. Chantal Nolin au 277-2163 (soir seulement).

1. What does Chantal want?
 - a) to buy a new violin
 - b) to buy a violin at least 15 years old
 - c) to sell her violin for at least \$100
2. Who has something to sell?
 - a) Danielle
 - b) Jocelyne
 - c) Chantal
3. Who is trying to buy something?
 - a) Michel
 - b) Jocelyne
 - c) Chantal
4. Who gives music lessons?
 - a) Danielle
 - b) Michel
 - c) Chantal

Example 5, an instrument from the pool in Intermediate Division history, is an illustration of the matching form. This form is efficient for testing factual relationships and knowledge of terminology, definitions, or concepts.

The instrument illustrated is a model that teachers may adapt by substituting names and terms appropriate to their local areas.

Example 5: Intermediate Division History

Many Ontario towns and cities are named after persons who played a part in the province's history. Match the place name at left with the person after whom it has been named by putting the appropriate letter in the spaces provided. You will have one letter left over.

- | | |
|-----------------|--|
| ___ Talbotville | a) the first lieutenant-governor of Upper Canada |
| ___ Brantford | b) a British officer who helped suppress the Rebellion of 1837 |
| ___ Brockville | c) the commander of the British and Canadian forces in the War of 1812 |
| ___ Simcoe | d) an Indian leader who fought on the British side in the American Revolution |
| | e) an Irish colonel who established a large settlement on the north shore of Lake Erie |

Example 6, an instrument from the pool in Intermediate Division geography, is an illustration of the classification form. This form, a combination of the features of multiple-choice and matching, is useful for the assessment of higher-level knowledge processes.

Example 6: Intermediate Division Geography

For each of the following occupations, indicate whether the work being done is classified as part of:

- a) primary industry
- b) secondary industry
- c) tertiary industry

commercial fisherman _____

salesman _____

miner _____

assembly-line worker _____

medical doctor _____

telephone repairman _____

farmer _____

Short-answer forms

Short-answer instruments require students to *supply* an answer consisting of one word or at most a few words. This form is useful in measuring students' ability to recall, generalize, comprehend, apply knowledge, process information, and perform calculations. Some of the more common short-answer forms are those requiring students to calculate the answer, fill in the blanks, complete a statement, label a diagram or map, supply missing information in a chart or table, or make a transformation.

Example 7 illustrates the basic form of instrument in the pool for Intermediate Division mathematics. For each objective in the curriculum guideline, a model is developed – in this case $a/b = ?$ (correct to two decimal places). Following the model, the constraints are given – in this case, “b” must be equal to or between 6 and 25, and “a” must be greater than “b” and less than or equal to 50. From the model, the teacher (or a computer) is able to generate a very large number of examples similar to the three provided in this instrument. All of the examples generated from the model which fall within the constraints are of approximately the same level of difficulty.

Example 7: Intermediate Division Mathematics

Objective: Dividing with whole-number divisors correct to two decimal places

Model: $a/b = ?$ (correct to two decimal places)
 $6 \leq b \leq 25$
 $b < a \leq 50$

Examples: $15/9 = ?$
 $33/12 = ?$
 $47/20 = ?$

Example 8, an instrument from the pool in French as a Second Language, requires students to fill in the blanks with information derived from the advertisement included with the instrument.

Example 8: French as a Second Language



SPECTACLE DE MARIONNETTES

Centre communautaire

Centre-ville

le samedi 19 décembre 1980

à 14h00 et à 19h00

billets : \$5.00

(enfants : demi-tarif)

Exemple : Le centre communautaire est au *centre-ville*.

1. Le spectacle est au _____
2. Quelle est la date du spectacle? C'est _____

3. Les places d'enfants coûtent _____
4. La séance du soir est à _____
5. La séance de l'après-midi est à _____
6. C'est un spectacle de _____

Example 9, an instrument from the language-usage section of the pool in Intermediate Division English, illustrates the transformation form short-answer instrument. The whole instrument, from which the sample items have been taken, consists of many items designed to assist teachers in assessing students' ability to use the comparative forms of adjectives and adverbs, and to distinguish between pairs of verbs such as learn/teach. Students are required to transform the sentence given into another sentence that begins with the words provided and has the same meaning as the original sentence.

Example 9: Intermediate Division English

Example: The cat ate the rat.
The rat was eaten by the cat.

Sample items:

1. Bananas are not as good as melons.
Melons are_____.
2. Joan learned to play tennis from Mr. Pritchard.
Mr. Pritchard_____.
3. Marion does not skate as well as Paula.
Paula skates_____.

Essay forms

Included in this category is any type of instrument that requires an extended response. The response may be oral, written, or graphic (e.g., preparation of a map, chart, graph, etc.). As well, the response may be free or restricted by precise instructions.

The essay form is useful in measuring originality, creativity, divergent thinking, and the ability to organize and express ideas.

It is more difficult to achieve reliable measurement with the essay form than it is with objective and short-answer forms. This difficulty may stem from the question itself, the performance of the student, or the judgment of the marker.

Some of the instruments in OAIP are directed towards the achievement of reliable measurement with the essay form. One such instrument is a writing folder developed for the pool in Intermediate Division English. The folder is designed to hold samples of student writing over a school year or from year to year. The collection of samples of writing in the folder allows for the assessment of growth in writing skills, and the assessment of a range of writing. The folder developed for the pool in English may be adapted easily for use in other subjects.

As well, the pools in Intermediate Division English, history, and geography describe approaches to the marking of student writing that have proved effective in improving the reliability of the essay-form assessment instrument. Two approaches described in the pools are detailed analytical marking and holistic scoring – a form of multiple marking.

A typical instrument of the essay form consists of a stimulus for writing and directions for proceeding. Example 10 is an instrument corresponding to an objective in the curriculum guideline for Intermediate Division history. It is intended to assess students' ability to express and support a position on the question of compulsory vs. voluntary voting.

Example 10: Intermediate Division History

In elections in Canada all eligible voters are urged to vote, but there is no law requiring them to do so. Do you think there should be such a law? In a few sentences explain the reasons for your opinion.

Example 11 is an essay instrument that requires students to design and describe an experiment, and to suggest alternate solutions.

Example 11: Grade 12 Chemistry

1. Introduction

The chemist is frequently called upon to identify a series of “unknown” materials. On some of these occasions the materials and equipment available for use are limited.

2. Special lab kit

Vials labelled respectively A, B, C, D, and E
Litmus paper (red and blue)
Light bulb assembly
 10^{-3} M silver nitrate (AgNO_3) – in a dropper bottle
1 M hydrochloric acid (HCl) – in a dropper bottle

3. Problem

The labels from five laboratory containers came off the containers and were mixed up. The labels, listed in alphabetical order, are barium hydroxide, calcium carbonate, citric acid, sodium chloride, and sugar.

Individual samples of the five materials are contained in the vials labelled A, B, C, D, and E.

Using only the materials in the *Special Lab Kit* design an experiment to identify correctly the contents of the five vials.

The design must be written in detail on the Scoring Guide – Section A – Experimental Design.

Do *NOT* proceed with the actual experimental work until the examiner has checked and approved the experimental design that you have suggested. *Note:* You are also provided with a kit of standard laboratory glassware and hardware.

4. Alternate solution(s)

Suggest, if you can, an alternate solution or solutions to the problem you have just completed. The alternate solution(s) may involve the use of any equipment and supplies that you might suggest. The examiner will give you additional mark credit for any workable or reasonable alternative solutions. Write the alternate solution(s) on the Scoring Guide – Section D – Alternate Solution(s).

Mixed forms

Some instruments in OAIP combine objective, short-answer, and essay items within the same instrument.

Example 12, an instrument from the pool in Intermediate Division history, consists of a stimulus followed by one multiple-choice and two essay items. A mixture of forms has the advantage of producing a balanced assessment.

Example 12: Intermediate Division History

The poem printed below was composed in Canada's Centennial year by Canadian Indian actor and writer Chief Dan George. It was originally part of a speech. Read the poem carefully; then answer the *three* questions that follow.

I have known you
when your forests were mine;
when they gave me my meat
and clothing.
I have known you
in your streams
and rivers
where your fish flashed
and danced in the sun,
where the waters said come,
come and eat of my abundance.
I have known you
in the freedom of your winds.
And my spirit,
like the winds,
once roamed your good lands.

Chief Dan George, *My Heart Soars*
(Saanichton, B.C.: Hancock House, 1974),
p. 63. Reprinted with the permission of the
publisher.

Whom, or what, does the writer seem to mean
by "you"? Explain your choice of answer in
one or two sentences.

Which one of the following statements *best*
describes the writer's view of the world of nature?
Circle your answer.

- a) He saw the world of nature as a good source
of food and clothing, but he disliked having
to roam around and hunt for the things he
needed.
- b) He lived in harmony with the world of nature,
using and enjoying its resources.
- c) He saw in the world of nature a place for
sports activities such as hunting, fishing, and
hiking.
- d) He saw the world of nature as something to
be used rather than enjoyed.

Describe in two or three sentences *one* way in
which the Indians' relationship with the world of
nature was changed by the arrival of Europeans.

Scales for measuring attitudes and values

The measurement of students' attitudes and values is important to the evaluation of the program. Scales can provide useful indications of the degree to which curriculum objectives in the affective area are being achieved. The measurement of attitudes and values should be restricted to the gathering of group data. Such a procedure preserves the anonymity of students, thereby respecting their privacy and eliminating the need for them to disguise their attitudes. Checklists, inventories, ranking measures, and questionnaires are common types of scales used for measuring attitudes and values.

OAIP will provide some instruments for measuring attitudes and values; anyone wishing a wider selection should consult the following Ministry of Education publications: *Evaluation of Student Achievement* (1976), *Evaluation and the English Program* (1979), and *Dramatic Arts, Intermediate and Senior Divisions* (1980).

Informal measures

Scales similar to those used for measuring attitudes and values are useful to teachers and students for recording their observations in the classroom. They, too, yield information that is valuable in program evaluation.

Example 13, an instrument from the pool in Intermediate Division English, is a log of listening performance. It is a self-evaluation technique for students to use in assessing their growth in listening skills.

Example 13: Intermediate Division English

Student Log of Listening Performance				
1	2	3	4	5
Not at all	Only once	Several times	Many times	Every opportunity
1. I made an effort to concentrate for a long period of time.				<input type="checkbox"/>
2. I listened critically and evaluated what I was listening to.				<input type="checkbox"/>
3. I consciously made an effort to organize what was said so I could remember the important points.				<input type="checkbox"/>
4. I tried to understand why something was being said.				<input type="checkbox"/>
5. I put into my own words what was being said.				<input type="checkbox"/>
6. In conversation, I used the points of view of others to guide my own comments and answers.				<input type="checkbox"/>

Example 14, also from the pool in Intermediate Division English, is an observational checklist for teachers to use in assessing students' attitudes towards reading.

Example 14: Intermediate Division English

<p align="center">Attitude to Reading Observation Scale (To be completed by the teacher)</p>					
<p>For each of the five criteria shown below rate all students on a scale of 1 (low) to 5 (high).</p>					
Student's name	Reads when directed at school	Reads when directed at home	Shows evidence of reading unassigned material	Frequently becomes absorbed in reading	Is eager to participate voluntarily in activities demanding reading inside and/or outside the classroom

Key: 1. Hardly ever demonstrates desired characteristic	3. Sometimes demonstrates desired characteristic
2. Demonstrates desired characteristic occasionally, but compulsion or desire to please seems to be the reason	4. Demonstrates desired characteristic frequently, but sometimes through compulsion or a desire to please
	5. Demonstrates desired characteristic voluntarily nearly always

Many additional examples of informal measures are found in the Ministry of Education publications referred to on page 18.

Classroom Uses

OAIP is new to educators in Ontario. During the school year 1980-81, as the pools are delivered to boards and schools, everyone in education will have the opportunity to become familiar with OAIP and to explore various ways of using it. Teachers are encouraged to experiment with OAIP in their classrooms, to share their experiences with colleagues and, in general, to take an active part in defining the role of OAIP in Ontario education. Since OAIP is designed as a resource, the Ministry of Education has no prescribed uses for it in the classroom. What follows is a suggested approach for starting to use OAIP.

Each pool of instruments will be accompanied by an introduction which, in addition to providing information about the contents of the pool and its method of organization, will establish an overall context for that pool. By reading carefully the introduction and skimming the instruments, teachers will get an overview of that pool, and a general understanding of how it relates to their programs. As each pool has unique features, teachers might find it useful to become familiar with pools in a number of subject areas. This familiarization will be desirable for teachers interested in language across the curriculum or involved in interdisciplinary programs, and for those who teach a number of subjects.

Once teachers have an overview of the pool (or pools) related to their programs, they might then proceed to identify and examine those instruments in the pool(s) that match the objectives and content of their particular programs. Most pools will have a table at the beginning that lists the objectives as they appear in the corresponding curriculum guideline. By comparing the objectives for their programs with those in the table, teachers will be able to identify the objectives common to both the curriculum guidelines and their programs. For each common objective, teachers will be able to determine from the introductory table those instruments that relate to it. The instruments identified in this way will constitute the pool of instruments currently available for use with a particular program.

From the supply of instruments available for use with a program, teachers may select an instrument or group of instruments to administer to students. The instruments may be used on their own or in combination with teachers' questions on a classroom test. For those teachers who are satisfied with their present assessment practices, the most convenient way of starting to use OAIP will likely be in combination

with their own assessment instruments. Other teachers may want to use OAIP instruments separately from their own assessment instruments so that OAIP results may be recorded separately and compared with the results obtained from their own assessments.

OAIP instruments may be administered prior to instruction, during instruction, or at the end of a unit of instruction. Where an instrument consists of a large number of items of a similar nature or where several instruments of similar difficulty relate to the same objective, teachers may use some items or instruments as a pre-test, others as classroom examples and exercises, and still others as a post-test.

Where instruments from OAIP are used as part of classroom tests, teachers may not wish at the outset to record separately the scores obtained on OAIP instruments. However, much of the value of using OAIP is realized through the recording and analysis of these results. For example, teachers who collect their own data related to specific instruments in OAIP could set up a card system and record the results obtained on each instrument in a number of repeated administrations. They could then use this information to develop a profile for classes of different ability levels (e.g., Grade 9 basic level, Grade 10 advanced level, etc.) or to observe the performance of classes of the same ability and grade level over several years.

Teachers who record and analyse the data resulting from the use of OAIP instruments with a class of students could find OAIP a useful tool for evaluating program. One way to approach program evaluation involves topic-by-topic and/or skill-by-skill analysis. This approach involves several steps: teachers begin by identifying the topics and/or skills within a program and then record information separately for each topic or skill. The information may be recorded for the class as a whole; for example, it may take the form of the percentage of students in the class who answer a multiple-choice question correctly, or the average score for the class on an essay-type question. Information collected in this way could assist teachers in assessing the strengths and weaknesses of their programs.

A further refinement in program evaluation could come from obtaining a pre-instruction score for each topic or skill as well as a post-instruction score so that teachers can assess the learning or progress that has taken place.

Larger-Scale Uses

At the provincial, board, and school levels, OAIP instruments will be useful in evaluating the effectiveness of programs and policies. In all larger-scale uses, the purposes of the assessment should be made clear to all participants and precautions taken to ensure that the anonymity of the individual participants is protected.

The Ministry of Education will use instruments in OAIP on a sample-survey basis for the purposes of monitoring its programs and policies and reporting to the public. The information resulting from the surveys will aid in the review and modification of curriculum guidelines and policies related to instruction. As well, such information gathered on a periodic basis will enable the Ministry of Education to monitor trends over time. The information gathered by the Ministry of Education provincially will also be useful to supervisory officers and teachers as a basis of comparison for the information they collect locally.

Although school boards will have access to the data from provincial surveys, many might also want to collect information more closely related to their local guidelines and student populations. Large boards will be able to obtain the information they require by following sampling procedures. In small boards, where the number of students is not large enough for sampling, it may be necessary to conduct an anonymous every-pupil survey. Such a procedure involves aggregating the data from the survey so that the anonymity of the participants is protected.

In addition to the provincial and board data related to program, principals may, in co-operation with their staffs, collect data for the purpose of monitoring school programs. They would use the same procedure as small school boards – an anonymous every-pupil survey – to obtain the information required for their purposes.

Many educators have worked together during the past two years to develop OAIP. The developers and the Ministry of Education hope that this resource will be useful to teachers in Ontario.

Notes
